



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/671,843      | 09/27/2000  | Naoaki Komiya        | YKI-0049            | 6716             |

7590

10/06/2003

Michael A Cantor Esq  
Cantor Colburn LLP  
55 Griffin Road South  
Bloomfield, CT 06002

EXAMINER

NGUYEN, KIMNHUNG T

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

2674

9

DATE MAILED: 10/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/671,843

Applicant(s)

KOMIYA ET AL.

Examiner

Kimnhung Nguyen

Art Unit

2674

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 23 May 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

This application has been examined. The claims 1-5 are pending. The examination results are as following.

#### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-2 are rejected under 35 U.S.C. 102(b) as being anticipated by Shibata et al. (US patent 6,147,451)

Regarding claims 1-2, Shibata et al. discloses in figures 2-4 that an active matrix type electroluminescence display device comprising a plurality of display pixels arranged in rows and columns in a matrix form; gate signal line (4) which is connected to and shared by a plurality of display pixels provided on each row; and gate drive circuit (31) for sequentially supplying select signal to the gate signal line (4); wherein each of the display pixels includes an electroluminescence element (20); a first thin film transistor (Tr1) in which a display signal is applied to the drain and which is switched on and off in response to the select signal, and a second thin film transistor (Tr2) for driving the electroluminescence element (20) based on the display signal; and the gate drive circuits (31) are placed so that said select signals are supplied from both ends of gate signal lines to said gate signal lines, each of said gate signal lines is connected to the gate drive circuits (31) at both ends of said gate signal lines to the gate signal line (see figures 2-4, column 4, lines 14-32), and the gate drive circuits (31) include a first and

Art Unit: 2674

second gate drive circuits arranged in a symmetric pattern to the right and left of the display portion.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shibata et al. (US patent 6,147,451) in view of Channing et al. (US patent 4,837,566).

Shibata et al. disclose in figures 2-4 that an active matrix type electroluminescence display device comprising a plurality of display pixels arranged in rows and columns in a matrix form as disclosed in claims 1-2. However, Shibata et al. do not disclose wherein each of said first and second gate drive circuits includes a plurality of shift registers for sequentially shifting a reference clock with a pulse width of one horizontal period. Channing et al. disclose in figure 8 a drive circuit for operating an electroluminescent display comprising a plurality of shift registers (69, 71) at left and right row drivers (see figure 8, column 9, lines 3-5) and a VSYNC pulse width of one horizontal period (see figures 8, 11, column 9, lines 3-27). It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a plurality of shift registers (69, 71) at left and right row drivers and a VSYNC pulse width of one horizontal period as taught by Channing et al. into the first and second gate drive circuits of display system of Shibata et al. because this would reverse polarity of the blanking signals, and

Art Unit: 2674

the left and right row drivers are alternately activated to sequentially scan the rows of the matrix (see column 9, lines 21-27).

5. Claims 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shibata et al. (US patent 6,147,451) and Channing et al. (US patent 4,837,566) as applied to claim 1 above, and further in view of Mihara (US patent 6,421,034).

Shibata et al. disclose in figures 2-4 that an active matrix type electroluminescence display device comprising a plurality of display pixels arranged in rows and columns in a matrix form as disclosed in claims 1-2. Channing et al. disclose in figure 8 a drive circuit for operating an electroluminescent display comprising a plurality of shift registers (69, 71) at left and right row drivers. However, Shibata et al. do not disclose wherein each of said first and second gate drive circuits includes buffer amplifiers for driving said gate signal lines based on the output of registers and corresponds to the number of rows of said plurality of display pixels. Mihara discloses in figure 1 an EL driver circuit having a plurality of amplifiers (OP1, OP2, OP3, OP4). It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a plurality of amplifiers as taught by Mihara into the first and the second gate drive circuits corresponds to the number of rows of the plurality of display pixels of Shibata et al. and Channing et al.'s system because this would for amplifying voltage, current or power in the system display.

***Response To Arguments***

6. Applicant's argument filed on 5/23/03 has been fully considered but they are not persuasive in view of new ground rejection.

Applicant argues that the claimed invention includes that each of said gate signal lines is connected to the gate drive at both ends of the gate signal lines. However, this argument is not persuasive due to the teaching of Shibata et al. (6,147,451) at disclosed in figures 2-3 above.

***Correspondence***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimnhung Nguyen whose telephone number (703) 308-0425.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **RICHARD A HJERPE** can be reached on **(703) 305-4709**.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D. C. 20231

**Or faxed to:**

**(703) 872-9314 (for Technology Center 2600 only).**

Hand-delivery response should be brought to: Crystal Park II, 2121 Crystal Drive,  
Arlington, VA Sixth Floor (Receptionist).

Art Unit: 2674

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Kimnhung Nguyen  
September 23, 2003

A handwritten signature in black ink, appearing to read 'R. Hjerpe', is positioned above the printed name and title.

RICHARD HJERPE  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600